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EXAMINER	
WONG, LESLIE	

ART UNIT	PAPER NUMBER
2177	2

DATE MAILED: 10/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/992,523	SINCLAIR, PAUL L.	
	Examiner	Art Unit	
	Leslie Wong	2177	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 November 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,9-16 and 18-24* is/are rejected.

7)☒ Claim(s) *8,17 and 25* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1, 9, and 18 are **provisionally** rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1, 10, and 19 of copending **Application No. 10/106,699**.

The following table shows the claims in the instant application '523 that are rejected by corresponding claims in '699.

Claims Comparison Table

Application No. 10/106,699	*Instant Application '523*
1. A method for selecting rows from a partitioned database table, comprising the steps of: a. creating a plurality of partition contexts, each partition context corresponding to a populated partition and storing at least a first value associated with a row; b. determining the lowest first value stored by the partition contexts; and c. identifying rows with a particular first value including: i. reading the partition contexts; ii. creating a temporary file context corresponding to one of the partition contexts, the file context including location data for a data block of rows in memory; and iii. reading rows in memory.	1. A method for selecting rows from a partitioned database table, comprising the steps of: a. creating a file context, which stores at least location data for a row and a first value associated with the row, for each populated partition of the partitioned database table; b. determining the lowest first value stored by the file contexts; and c. identifying rows with a particular first value by reading the file contexts.
10. A database system for selecting rows from a partitioned database table, the	9. A database system for selecting rows from a partitioned database table, the

partitioned database table including rows and columns and being divided into partitions and at least one of the partitions in the table being populated by one or more rows, the system comprising:	partitioned database table including rows and columns and being divided into partitions and at least one of the partitions in the table being populated by one or more rows, the system comprising:
one or more nodes;	one or more nodes;
a plurality of CPUS, each of the one or more nodes providing access to one or more CPUS;	a plurality of CPUs, each of the one or more nodes providing access to one or more CPUs;
a plurality of processes, each of the one or more CPUS providing access to one or more virtual processes;	a plurality of processes, each of the one or more CPUs providing access to one or more virtual processes;
each process configured to manage date including the partitioned database table, stored in one of a plurality of data-storage facilities;	each process configured to manage data, including the partitioned database table, stored in one of a plurality of data-storage facilities;
a partitioned table access component configured to select rows from the table by:	a partitioned table access component configured to select rows from the table by:
a. creating a plurality of partition contexts, each partition context corresponding to a populated partition and storing at least a	a. creating a file context, which stores at least location data for a row and a first value associated with the row, for each

first value associated with a row; b. determining the lowest first value stored by the partition contexts; and identifying rows with a particular first value including: i. reading the partition contexts; creating a temporary file context corresponding to one of the partition contexts, the temporary file context including location data for a data block of rows in memory; and iii. reading rows in memory.	populated partition; b. determining the lowest first value stored by the file contexts; and c. identifying rows with a particular first value by reading the file contexts.
19. A computer program, stored in a tangible medium, for selecting rows from a partitioned database table, the program comprising executable instructions that cause a computer to: a. create a plurality of partition contexts, each partition context corresponding to a populated partition and storing at least a first value associated with a row; b. determine the lowest first value stored	18. A computer program, stored in a tangible medium, for selecting rows from a partitioned database table, the program comprising executable instructions that cause a computer to: a. create a file context, which stores at least location data for a row and a first value associated with the row, for each populated partition of the partitioned database table;

by the partition contexts; and c. identify rows with a particular first value by: i. reading the partition contexts; ii. creating a temporary file context corresponding to one of the partition contexts, the temporary file context including location data for a data block of rows in memory; and iii. reading rows in memory.	b. determine the lowest first value stored by the file contexts; and c. identify rows with a particular first value by reading the file contexts.

Claims 1, 10, and 19 of patent application # 10/106,699 contains every element of claims 1, 9, and 18 of the instant application and as such anticipates claims 1, 9, and 18 of the instant application.

"A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or **anticipated by**, the earlier claim. In re Longi, 759 F.2d at 896, 225 USPQ at 651 (affirming a holding of obviousness-type double patenting because the claims at issue were obvious over claims in four prior art patents); In re Berg, 140 F.3d at 1437, 46 USPQ2d at 1233 (Fed. Cir. 1998) (affirming a holding of obviousness-type double patenting where a patent application claim to a genus is anticipated by a patent claim to a species within that genus). " ELI LILLY AND COMPANY v BARR LABORATORIES, INC., United States Court of Appeals for the Federal Circuit, ON PETITION FOR REHEARING EN BANC (DECIDED: May 30, 2001).

This is a provisional obviousness-type double patenting rejection.

3. Claims 1, 9, and 18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1, 12, and 23 of **Patent No. 6,772,163**.

The following table shows the claims in the instant application '523 that are rejected by corresponding claims in patent '163.

Claims Comparison Table

Patent No. 6,772,163	***Instant Application '523***
1. A method for selecting rows from first and second tables each having rows containing values in columns, in at least the first table the rows being divided into partitions at least one of which is populated by one or more rows, the method comprising: a. defining a subset of the populated partitions of the first table that excludes at least one populated partition of the first	1. A method for selecting rows from a partitioned database table, comprising the steps of: a. creating a file context, which stores at least location data for a row and a first value associated with the row, for each populated partition of the partitioned database table; b. determining the lowest first value stored by the file contexts; and

table; b. creating a file context, which stores at least location data for a row and a first value associated with the row, for each populated partition in the subset of the populated partitions of the first table; c. determining the lowest first value stored by the file contexts for the first table; d. identifying rows with a particular first value by at least reading the file contexts of the first table; and e. repeating a through d until the subsets of the populated partitions of the first table have included all the populated partitions of the first table.	c. identifying rows with a particular first value by reading the file contexts.
12. A database system for iteratively selecting rows from a first table, the database system including a second table, the first table including rows and columns and being divided by rows	9. A database system for selecting rows from a partitioned database table, the partitioned database table including rows and columns and being divided into partitions and at least one of the partitions

into partitions and at least one of the partitions in the table being populated by one or more rows, the system comprising: one or more nodes; a plurality of CPUs, each of the one or more nodes providing access to one or more CPUs; a plurality of processes, each of the one or more CPUs providing access to one or more virtual processes; each process configured to manage data, including the partitioned database table, stored in one of a plurality of data-storage facilities; a partitioned table access component configured to select rows from at least the first table by a. defining a subset of the populated partitions of the first table that excludes at least one populated partition of the first table; b. creating a file context, which stores at	in the table being populated by one or more rows, the system comprising: one or more nodes; a plurality of CPUs, each of the one or more nodes providing access to one or more CPUs; a plurality of processes, each of the one or more CPUs providing access to one or more virtual processes; each process configured to manage data, including the partitioned database table, stored in one of a plurality of data-storage facilities; a partitioned table access component configured to select rows from the table by: a. creating a file context, which stores at least location data for a row and a first value associated with the row, for each populated partition; b. determining the lowest first value stored by the file contexts; and

least location data for a row and a first value associated with the row, for each populated partition in the subset of the populated partitions of the first table; c. determining the lowest first value stored by the file contexts for the first table; d. identifying rows with a particular first value by at least reading the file contexts of the first table; and e. repeating a through d until the subsets of the populated partitions of the first table have included all the populated partitions of the first table.	c. identifying rows with a particular first value by reading the file contexts.
23. A computer program, stored in a tangible medium, for selecting rows from a first table, the first table having rows and columns and divided by row into partitions, at least one of the partitions being populated by rows, the program comprising executable instructions that cause a computer to:	18. A computer program, stored in a tangible medium, for selecting rows from a partitioned database table, the program comprising executable instructions that cause a computer to: a. create a file context, which stores at least location data for a row and a first value associated with the row, for each

a. define a subset of the populated partitions of the first table that excludes at least one populated partition of the first table; b. create a file context, which stores at least location data for a row and a first value associated with the row, for each populated partition in the subset of the populated partitions of the first table; c. determine the lowest first value stored by the file contexts for the first table; d. identify rows with a particular first value by at least reading the file contexts of the first table; and e. repeat a through d until the subsets of the populated partitions of the first table have included all the populated partitions of the first table.	populated partition of the partitioned database table; b. determine the lowest first value stored by the file contexts; and *c. identify rows with a particular first value by reading the file contexts.*

Claims 1, 12, and 23 of Patent No. 6,772,163 contains every element of claims 1, 9, and 18 of the instant application and as such anticipates claims 1, 9, and 18 of the instant application.

"A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or **anticipated by**, the earlier claim. In re Longi, 759 F.2d at 896, 225 USPQ at 651 (affirming a holding of obviousness-type double patenting because the claims at issue were obvious over claims in four prior art patents); In re Berg, 140 F.3d at 1437, 46 USPQ2d at 1233 (Fed. Cir. 1998) (affirming a holding of obviousness-type double patenting where a patent application claim to a genus is anticipated by a patent claim to a species within that genus). " ELI LILLY AND COMPANY v BARR LABORATORIES, INC., United States Court of Appeals for the Federal Circuit, ON PETITION FOR REHEARING EN BANC (DECIDED: May 30, 2001).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-7, 9-16, and 18-24 are rejected under 35 U.S.C. 102(b) as being anticipated by **Choy** (U.S. Patent 6,092,061).

Regarding claims 1 and 18, **Choy** teaches a method and a computer program for selecting rows from a partitioned database table, comprising the steps of:

a. creating a file context, which stores at least location data for a row and a first value associated with the row, for each populated partition of the partitioned database table (col. 6, lines 18-20);

b. determining the lowest first value (i.e., Employee No. 01) stored by the file contexts (Fig. 2); and

c. identifying rows with a particular first value by reading the file contexts (i.e., index) (col. 6, lines 27-34).

Regarding claims 2-3, 11-12, and 19-20, **Choy** further teaches where the first values stored are based at least in part on values in one or more specified columns of the associated rows (col. 4, lines 56-58; Figs. 1-3).

Regarding claims 4, 13, and 21, **Choy** further teaches where the first values stored by the file contexts are the result of a hash function applied to values in one or more specified columns of the associated rows (col. 6, lines 47-51).

Regarding claims 5-6, 14-15, and 22-23, **Choy** further teaches where step a comprises the steps of:

i. creating an empty file context for a populated partition (col. 6, lines 18-20);

ii. finding the lowest first value associated with a row in that partition (col. 6, lines 47-50);

iii. storing the location data and the first value for the row having the lowest first value in the file context for that partition (col. 6, lines 41-46); and

iv. repeating steps i - iii until file contexts have been created for all populated partitions (col. 5, lines 10-15).

Regarding claims 7, 16, and 24, **Choy** further teaches updating each file context to store location data and the first value for a row in the associated partition with a first value equal to or greater than a desired first value (col. 6, lines 5-17).

Regarding claim 9, **Choy** teaches a database system for selecting rows from a partitioned database table, the partitioned database table including rows and columns and being divided into partitions and at least one of the partitions in the table being populated by one or more rows, the system comprising:

one or more nodes (Fig. 4);

a plurality of CPUs, each of the one or more nodes providing access to one or more CPUs (col. 4, lines 40-49);

a plurality of processes, each of the one or more CPUs providing access to one or more virtual processes (col. 4, lines 40-49);

each process configured to manage data, including the partitioned database table, stored in one of a plurality of data-storage facilities (Fig. 4);

a partitioned table access component configured to select rows from the table by:

a. creating a file context, which stores at least location data for a row and a first value associated with the row, for each populated partition (col. 6, lines 18-20);

b. determining the lowest first value (i.e., Employee No. 01) stored by the file contexts (Fig. 2); and

c. identifying rows with a particular first value by reading the file contexts (i.e., index)(col. 6, lines 27-34).

Allowable Subject Matter

6. Claims 8, 17, and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Prior art of record fails to teach a combination of elements including examining file contexts in order of the populated partitions until a file context storing a first value less than the desired first value is selected; if the partition corresponding to the selected file context contains at least one row having the desired first value, storing the location data and first value for the first such row in the file context; if the partition corresponding to the selected file context contains no row having the desired first value and at least one row having a first value greater than the desired first value, storing the location data and first value for the first such row in the file context; if the partition corresponding to the selected file context contains no row having the desired first value and no row having a first value greater than the desired first value, removing the file context as recited in dependent claims 8, 17, and 25.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sinclair et al. (U.S. Patent 6,772,163)

Li et al. (U.S. Patent 5,802,357)

MacNicol et al. (U.S. Patent 6,341,281B1)

Lin et al. (U.S. Patent 6,594,659 B1)

Lyle et al. (U.S. Patent 6,366,902 B1)

Johnson (U.S. Patent 6,216,125 B1)

French et al. (U.S. Patent 5,794,229)

Klein et al. (U.S. Patent 6,349,310 B1)

Christy (U.S. Patent 6,366,911 B1)

Ghazal et al. (U.S. Patent 6,505,188 B1)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie Wong whose telephone number is (703) 305-3018. The examiner can normally be reached on Monday to Friday 9:30am - 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (703) 305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leslie Wong
Patent Examiner
Art Unit 2177

LW
September 30, 2004